

CITY OF SAINT PAUL Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220 Saint Paul, Minnesota 55101-1806 Telephone: 651-266-8989
Facsimile: 651-266-9124
Web www.straul.gov/dsi

### Cada Camplianca Danart

April 12, 2012

Housing and Redevelopment 25 W 4th St Ste 1300 St Paul MN 55102

Re:

971 Fremont Ave

File#:

11 109309 VB2

Dear Property Owner:

The following is the Code Compliance report you requested on February 13, 2012.

Please be advised that this report is accurate and correct as of the date April 12, 2012. All deficiencies identified by the City after this date must also be corrected and all codes and ordinances must be complied with. This report is valid for 365 days from April 12, 2012. This report may be used in lieu of a Truth in Housing Report required in St Paul Legislative Code 189. This building must be properly secured and the property maintained at all times.

In order to sell or reoccupy this property the following deficiencies must be corrected:

### BUILDING Inspector: Jim Seeger Phone: 651-266-9046

- Dry out basement and eliminate source of moisture.
- Remove mold, mildew and moldy or water damaged materials.
- Install handrails (34 inches 38 inches above each nosing) and guardrails (36 inch minimum) at all stairways, and return hand rail ends into a newel post or wall per attachment.
- Provide complete storms and screens, in good repair for all door and window openings.
- Provide functional hardware at all doors and windows
- Exit doors shall be capable of being opened from the inside, easily and without the use of a key. Remove all surface bolts.
- Repair or replace damaged doors and frames as necessary, including storm doors.
- Weather seal exterior doors, threshold and weather-stripping.
- Repair walls, ceiling and floors throughout, as necessary.
- Prepare and paint interior and exterior as necessary. Observe necessary abatement procedures (EPA, MPCA and St. Paul Legislative Code, Chapter 34 for additional information) if lead base paint is present.
- Provide fire block construction as necessary and seal chases in basement ceiling.
- Air-seal and insulate attic/access door.

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### BUILDING Inspector: Jim Seeger

Phone: 651-266-9046

- Install Smoke Detectors/Carbon Monoxide Detectors per MN Conservation Code and the MN Dept. of Labor and Industry: Install per code where feasible.
- Provide major clean-up of premises.
- Repair siding, soffit, fascia, trim, etc. as necessary.
- Provide proper drainage around house to direct water away from foundation of house.
- Provide proper drainage around house to direct water away from foundation of garage.
- Install downspouts and a complete gutter system.
- Install rain leaders to direct drainage away from foundation.
- Install flashing in an approved manner at the intersection of the roof with walls, chimneys, and other conjoined surfaces.
- Provide general rehabilitation of garage.
- Review all applicable codes & policies when replacing windows including egress windows for sleeping rooms.
- Remove trees which are against foundation of home and garage.
- Remove all wall, ceiling and floor covering from basement.
- Second floor has no legal egress windows.
- Install tempered glass in window at top of second floor stairs.
- Install new floor in first floor vanity in bathroom.
- Replace front sidewalk at street steps at top.
- Properly repair and sister garage ceiling joist.
- Install 1 hour fire wall at west side of garage.
- Install drop edge on house.
- Have house tested for mold when done. Provide documentation.
- A building permit is required to correct the above deficiencies.

### ELECTRICAL Inspector: Dan Moynihan Phone: 651-266-9036

- Ground the electrical service to the water service with a copper conductor within 5 feet of the entrance point of the water service
- Bond around water meter with a copper wire sized for the electrical service per Article
   250 of the NEC
- Install/replace GFCI receptacle in basement bathroom adjacent to the sink
- Ground bathroom light in first floor bathroom.
- Install globe-type enclosed light fixture on all closet lights
- Remove all cord wiring
- Repair or Replace all broken, missing or loose light fixtures, switches and outlets, covers and plates
- Check all outlets for proper polarity and verify ground on 3-prong outlets. No power at time of inspection.
- Install hard-wired, battery backup smoke detector per bulletin 80-1 and other smoke detectors as required by the IRC. Also, Install carbon monoxide detector(s) within 10 feet of all bedrooms
- Remove and or/ re-wire all illegal, improper or hazardous wiring in basement/garage.

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### ELECTRICAL Inspector: Dan Moynihan Phone: 651-266-9036

- Install box extensions on devices in wood paneling.
- Based on repair list purchase permit for 7 circuits.
- All added receptacles must be grounded, tamper-resistant and be on an Arc-Fault Circuit Interrupter-protected circuit.
- Any open walls or walls that are opened as part of this project must be wired to the standards of the current NEC.
- All buildings on the property must meet the St. Paul Property Maintenance Code (Bulletin 80-1).
- All electrical work must be done by a Minnesota-licensed electrical contractor under an electrical permit.

### PLUMBING Inspector: Rick Jacobs Phone: 651-266-9054

- Basement Water Heater No gas shut off or gas piping incorrect (IFGC 402.1)
- Basement Water Heater Vent must be in chimney liner (IFGC 501.12)
- Basement Water Heater Water piping incorrect (MPC 1730 Subp. 1)
- Basement Water Heater gas venting incorrect (IFGC 503)
- Basement Water Heater not fired or in service (MPC 2180)
- Basement Water Piping improper fittings or usage (MPC 0420)
- Basement Water Piping improper piping or usage (MPC 0520)
- Basement Water Piping provide water piping to all fixtures and appliances (MPC 1700) also replace missing water piping to code.
- Basement Water Piping repair or replace all corroded, broken or leaking piping (MPC 4715.1720)
- Basement Water Piping run 1 inch water line from meter to first major take off (SPRWS Water Code)
- Basement Water Meter verify service valves function properly.
- Basement Soil and Waste Piping remove basement fixture waste into clean out and re pipe correctly.
- Basement Soil and Waste Piping no front sewer clean out (MPC 1000)
- Basement Soil and Waste Piping replace corroded cast iron or steel waste piping (MPC 0200)
- Basement Soil and Waste Piping unplugged or open piping; back pitched piping (MPC 1000)
- Basement Gas Piping dryer gas shutoff; connector or piping incorrect (IFGC 402.1)
- Basement Gas Piping replace improper piping or fittings (IFGC 406.1.2)
- Basement Gas Piping run dryer vent to code (IFGC 613.1 IMC 604.1)
- Basement Laundry Tub provide a vacuum breaker for the spout (MPC 2000 B)
- Basement Laundry Tub waste incorrect (MPC 2300)
- Basement Lavatory unvented (MPC 0200. E)
- Basement Lavatory waste incorrect (MPC 2300)
- Basement Lavatory water piping incorrect (MPC 0200 P.)
- Basement Sink unvented (MPC 0200. E)

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### PLUMBING Inspector: Rick Jacobs Phone: 651-266-9054

- Basement Sink waste incorrect (MPC 2300)
- Basement Sink water piping incorrect (MPC 0200 P.)
- Basement Soil and Waste Piping improper connections, transitions, fittings or pipe usage (MPC 2420)
- Basement Soil and Waste Piping improper pipe supports (MPC 1430 Subp. 4)
- Basement Toilet Facilities unvented (MPC 0200. E) also reset toilet to floor.
- Basement Toilet Facilities waste incorrect (MPC 2300)
- Basement Toilet Facilities water piping incorrect (MPC 0200 P.)
- First Floor Lavatory waste incorrect (MPC 2300)
- First Floor Sink faucet is missing, broken or parts missing (MPC 0200.P.)
- First Floor Sink unvented (MPC 0200. E)
- First Floor Sink waste incorrect (MPC 2300) also properly cap any open waste piping.
- First Floor Toilet Facilities waste incorrect (MPC 2300) also reset toilet to floor.
- First Floor Tub and Shower incorrectly vented (MPC 2500)
- First Floor Tub and Shower provide stopper (MPC 1240)
- First Floor Tub and Shower replace waste and overflow (MPC 1240)
- First Floor Tub and Shower waste incorrect (MPC 2300)
- First Floor Tub and Shower water piping incorrect (MPC 0200 P.)
- Exterior Lawn Hydrants Requires backflow assembly or device (MPC 2000)
- Exterior Rain Leader Not properly plugged or capped off
- First Floor Gas Piping range gas shut off; connector or piping incorrect (IFGC 411 1.3.3)
- Comments: The basement bathroom fixtures were installed without a permit and never inspected. Obtain the proper permits and provide access to all plumbing for proper inspections for the basement bathroom.
- Obtain plumbing permits prior to commencement of work.

### HEATING Inspector: Maureen Hanson Phone: 651-266-9043

- Install approved lever handle manual building shutoff gas valve in an accessible location ahead of the first brach tee
- Clean and Orsat test furnace burner. Check all controls for proper operation. Check furnace heat exchanger for leak; provide documentation from a licensed contractor that the heating unit is safe
- Install approved metal chimney liner for the water heater.
- Vent clothes dryer to code
- Provide adequate combustion air and support duct to code
- Provide support for gas lines to code
- Plug, cap and/or remove all disconnected gas lines
- Provide a window in the bathrooms with an aggregate glazing area of not less than 3 square feet, one-half of which must be openable or provide exhaust system vented to outside. A mechanical ventilation permit is required if an exhaust system is installed.

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HEATING Inspector: Maureen Hanson Phone: 651-266-9043

- All supply and return ducts for warm air heating system must be clean before final
  approval for occupancy. Provide access for inspection of inside of ducts or provide
  documentation from a licensed duct-cleaning contractor that the duct system has been
  cleaned.
- Repair and/or replace heating registers as necessary
- Provide heat in every habitable room and bathrooms
- Verify that A/C system is in working order.
- Mechanical gas permit is required for the above work.

### **ZONING**

- 1. This property is in a(n) RT1 zoning district.
- 2. This property was inspected as a Single Family Dwelling.

### **Notes:**

- See attachment for permit requirements and appeals procedure.
- Most of the roof covering could not be inspected from grade. Recommend this be done before rehabilitation is attempted.

This is a registered vacant building. In order to sell or reoccupy this building, all deficiencies listed on this code compliance report must be corrected in accordance with the Minimum Housing Standards of the St. Paul Legislative Code (Chapter 34) and all required permits must receive final approval within six (6) months of the date of this report. One (1) six-month time extension may be requested by the owner and will be considered if it can be shown that the code compliance work is proceeding and is more than fifty (50) percent complete in accordance with Legislative Code Section 33.03(f).

You may file an appeal to this notice by contacting the City Clerk's Office at 651-266-8688. Any appeal must be made in writing within 10 days of this notice. (You must submit a copy of this notice when you appeal, and pay a filing fee.)

If you have any questions regarding this inspection report, please contact Jim Seeger between 7:30 - 9:00 AM at 651-266-9046 or leave a voice mail message.

Sincerely,

James L. Seeger, Code Compliance Officer

Phone: 651-266-9046

Email: james.seeger@ci.stpaul.mn.us

JLS:ml Attachments Click Here to upgrade to Unlimited Pages and Expanded Features orporated

Phone: 651-436-2930 Fax: 651-436-3918

January 25, 2012

Cynthia Carlson Heins Real Estate Manager Planning and Economic Development Suite 1100, 25 West 4th Street Saint Paul, MN 55102

RE: Asbestos Survey

971 Fremont Ave., St. Paul, MN

1596-12S-K

Dear Ms. Cynthia Carlson Heins:

AllPhase Companies, Incorporated, (AllPhase) performed an asbestos survey at the above referenced site in connection with a renovation in order to identify Asbestos-Containing Material (ACM), which is a building material that has greater than 1% asbestos. The following report contains the results of the survey performed at the above referenced site.

In summary, 20 samples of building materials were collected and analyzed for asbestos type and amount. Asbestos was detected above 1 percent in **one of the twenty samples**. These samples only represent building materials that were collected from the referenced building structure.

### No samples detected asbestos above 0% and less then 1% asbestos.

Friable ACM, is defined by the Asbestos NESHAP, as any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. (Sec. 61.141)

Nonfriable ACM is any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Supbart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. EPA also defines two categories of nonfriable ACM, Category I and Category II nonfriable ACM, which are described later in this guidance.

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Refer to the asbestos Laboratory Report and chain of custody for other building materials tested and their locations. The following samples detected the presence of asbestos greater than 1%:

### Category I - Floor tile in south room and northwest room (laundry room) of basement (not mastic)—510 sf

This survey is an attempt to identify ACM. However, there is no guarantee that all potential ACM was identified. As a rehabilitation, wall interiors were not assessed. If suspect ACM is discovered during the work and is not



listed in this or previous limited surveys, work on that portion of the building should cease, the material wetted and covered, and an asbestos inspector brought to the site to sample and submit to a certified laboratory the sample to determine its asbestos content. Pending analytical results, an abatement crew should remove the ACM before work continues.

### INTRODUCTION

The scope of our services was to conduct an asbestos survey, which includes collecting a small portion of the building materials and submitting the sample to a certified laboratory for analysis by PLM. Analysis only assesses the portion of building material collected and submitted.

- A. Collect bulk samples of suspect ACMs for laboratory analysis.
- B. Analyze the collected samples for asbestos content.

Minnesota requires surveys to be performed by a Minnesota Certified Inspector. This survey was conducted by David Jenkin – Asbestos Inspector #AI8101.

Samples of suspect ACMs were collected by AllPhase by removing a small portion of the suspect material and then placing the individual samples into separate sealed containers.

### DISCLAIMERS

Asbestos surveys do not necessarily succeed in identifying all locations and types of ACM on-site. This is because of the variety of locations and the inconsistency of asbestos occurrence in a given building material. Our survey is based solely upon the building materials that were observed and sampled for analysis. Therefore, if unsampled building materials are encountered during the demolition, they should be assessed on a material-by-material basis. If suspect ACM is observed which has not been listed in our evaluation, it should be collected and evaluated by a certified individual and laboratory, respectively. If there is a potential for that material to be ACM, work should stop until the question of asbestos content and/or abatement is resolved in a manner that protects human health and the environment and abides by regulatory guidelines.

Certain building materials are not considered suspect ACM and are not sampled as part of the survey. These materials include but are not limited to wood, concrete (with exceptions), plastics such as polyethylene, polystyrene and polyvinylchloride, fiberglass, rubber (natural and neoprene—black synthetic), foam insulation, metals and glass.

### **METHODOLOGY**

Building materials were analyzed by a NVLAP-accredited laboratory, #101768-0. Laboratory analysis was conducted in accordance with Environmental Protection Agency (EPA) guidelines. The examination for the presence and identification of asbestos fibers in bulk samples is performed in the laboratory using cross-polarized light microscopy and dispersion-staining, particle-identification techniques. Analysis was performed in accordance with EPA 600/M4-82-020 and EPA 600/R-93/116 where applicable. This methodology determines the presence of asbestos varieties, which include Chrysotile, Amosite, Crocidolite, Anthophyllite, Tremolite and Actinolite.

### REMARKS

Some of the rules and regulations set by the Environmental Protection Agency (EPA) may apply when the existence of ACMs is confirmed. A complete review of these rules can be found in Part 3 of the Federal Register EPA, 40 CFR Part 61. Summaries of these rules are as follows:



According to §61.145 of NESHAPS, friable ACMs <u>must</u> be removed from the site prior to demolition. This includes materials that were originally non-friable but have become friable—that is, Category I & II material—due to damage or deterioration—for example, floor tile that has significant chipping or cracking. The necessity for the removal of Category I and II material is evaluated on a site-by-site basis.

Disturbing ACM may require that the Minnesota Pollution Control Agency and/or the Minnesota Department of Health be notified prior to activities with asbestos.

The environmental services performed by AllPhase's survey crew and analyst for this project have been conducted in a manner consistent with the degree of care and technical skill exercised by environmental professionals currently practicing in this area under similar budget and time constraints. Recommendations contained in this report represent our professional judgment at the time the project was performed. No other warranty is intended or implied.

David Jenkin, P.G.

Asbestos Inspector (#AI8101)

David John

S III

CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511 Tel: 866-481-1412; Fax: 919-481-1442

CHAIN OF CUSTODY RECORD
ASBESTOS/LEAD ANALYSIS

191 of 2

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A12.0537

## CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511 Tel: 866-481-1412; Fax: 919-481-1442

# CHAIN OF CUSTODY RECORD ASBESTOS/LEAD ANALYSIS

192 of 2

Client: All Plase Companies, Inc.		Project Manager: David Jenton	
Address: 404-A St. Croix Fil N.		Phone: 651-436-2930	
Lakeland, MN 55043		Fax: -3918	
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### LABORATORY REPORT ASBESTOS BULK ANALYSIS

Client: AllPhase Companies, Inc.

404-A St. Croix Trail, North Lakeland, MN 55043

Analyzed:

Received:

CEI Lab Code:

01-20-12

A12-0537

01-24-12

Reported: 01-24-12 Analyst:

Kamila Reichert

Project: 971 Fremont Ave.; 1596-12S-K

CLIENT ID	CEI LAB ID	HOMOGENEITY DESCRI	PTION				% ASBES	TOS
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CEI Labs 107 New Edition Court, Cary, NC 27511 Phone: 919-481-1413 Fax: : 919-481-1442

Project: 971 Fremont Ave.; 1596-12S-K

Lab Code: A12-0537

CLIENT ID	CEI LAB ID	HOMOGENEITY DESCRIPTION	% ASBESTOS
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		BIND 5%	

CEI Labs 107 New Edition Court, Cary, NC 27511 Phone: 919-481-1413 Fax: : 919-481-1442

Project: 971 Fremont Ave.; 1596-12S-K

Lab Code: A12-0537

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F-15	A1243048	SHEETROCK				ND	
	Heterogeneous,	White, Non-fibrous, Bound	0801	A51 :			
		GYPSUM	85 %	CELL	15%		

### The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY	= Chrysotile	CELL	= Cellulose		DEBR = Debris	3
AMOS	= Amosite	FBGL	= Fibrous Glass	2 K	BIND = Binder	r .
CROC	= Crocidolite	CACO	= Calcium Carbonate		SILI = Silicati	es
TREM	= Tremolite	SYNT	= Synthetics		GRAV = Grave	1
ANTH	= Anthophyllite	WOLL	= Wollastonite		MAST = Mastic	:
ACTN	= Actinolite	CERWL	= Ceramic Wool		PLAS = Plaste	r
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	= Non-Asbestiform	FBGY =	Tremolite Fibrous Gypsum		RUBR =Rubber	
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CLIENT: AllPhase Companies, Inc.

PROJECT: 971 Fremont Ave.; 1596-12S-K

CEI LAB CODE: A12-0537

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, CEI Labs will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that CEI Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). CEI Labs's NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST

REVIEWED BY

Tianbao Bai, Ph.D. Laboratory Director

Komila Reichert

End of Report

Houre Energy Rating Certificate

St Paul, MN 55106



5 Stars As Is

Uniform	Uniform Energy Rating System	ng System					Energy	<b>Energy Efficient</b>		
1 Star	1 Star Plus	2 Stars	1 Star Plus 2 Stars Plus 3 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	4 Stars   4 Stars Plus   5 Stars Plus	The same of
500-401	400-301 300-251	300-251	250-201 200-151	200-151	150+101	100-91	90-86 // 85-71	85-71	70 or Less	7
HERS Index:	Jex:	75							D	Sample of the State of the Stat
General	<b>General Information</b>							<u></u>		DITECTOR
	Conditioned Area:	Area:	2454 sq. ft.		H	HouseType:	Single-family detached	ily detach	pa	
S	Sonditioned Vo	olume:	Conditioned Volume: 18707 cubic ft.		7	Foundation:	More than one type	one type		

## Mechanical Systems Features

Bedrooms:

Fuel-fired air distribution, Natural gas, 93.0 AFUE. Heating: Electric baseboard or radiant, Electric, 100.0 % EFF. Heating:

Conventional, Natural gas, 0.55 EF, 40.0 Gal. Water Heating:

0.00 CFM. Duct Leakage to Outside:

None Ventilation System:

Cooling: No Heating: No Programmable Thermostat:

	loor: NA	Window Type: NFRC .30 / .29		Rate: Htg: 1705 Clg: 1705 CFM50	Method: Blower door test		Range/Oven Fuel: Natural gas	Clothes Dryer Fuel: Natural gas	Inter EE 201
	Exposed Floor:	Window T	Infiltration:				Range/Ov	Clothes Dry	Clothon Driver EE.
	at: R-0	g: R-11	ls: R-11, R-40	ls: R-11.1	Slab: R-0.0 Edge, R-0.0 Under	tures	ghting: 10.00	ghting: 0.00	Refrigerator (kWh/m) - 601 00
<b>Building Shell Features</b>	Ceiling Flat:	Vaulted Ceiling:	Above Grade Walls: R-11, R-40	Foundation Walls: R-11.1	Sla	<b>Lights and Appliance Features</b>	Percent Interior Lighting:	Percent Garage Lighting:	Refrigerator (k)

The Home Energy Rating Standard Disclosure for this home is available from the rating provider. REW/Rate - Residential Energy Analysis and Rating Software v12.98

This information does not constitute any warranty of energy cost or savings. © 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number: 526-1261

Certified Energy Rater: Terry Cagle-Kemp

Rating Date:

Rating Ordered For: City of St Paul

Estima	<b>Estimated Annual Energy Cost</b>	nergy Cost	
	As Is		
Use	MMBtu	Cost	Percent
Heating	73.2	\$748	39%
Cooling	2.7	\$82	4%
Hot Water	25.6	\$231	12%
Lights/Appliances	30.5	\$689	36%
Photovoltaics	-0.0	0-\$	%0-
Service Charges		\$180	%6
Total		\$1929	100%

This home meets or exceeds the minimum criteria for all of the following:

TITLE

Company Address

0.00

Ceiling Fan (cfm/Watt):

Dishwasher Energy Factor: 0.46

City, State, Zip Phone #

Fax#

Houre Energy Rating Certificate

St Paul, MN 55106

**Projected Rating** 5 Stars Plus

**Energy Efficient** 

**Uniform Energy Rating System** 

The second secon	4 Stars   4 Stars Plus   5 Stars   5 Stars Plus	70 or Less			pə		
	5 Stars	85-71		<u></u>	ily detach	one-type	
	4 Stars Plus/	V/ 98-06			Single-family detached	More than one type	
	-	100-91	3	/	HouseType;	Foundation:	
	3 Stars Plus	150/101			Ĭ	/	
	3 Stars	200-151	* * *.				
	1 Star Plus 2 Stars Plus 3 Stars Plus	250-201			2454 sq. ft.	18707 cubic ft	4
	2 Stars	300-251	63		Area:		Bedrooms:
The state of the s	1 Star Plus	400-301	Index:	al Information	Conditioned Area:	Conditioned Volume:	Bedr
ı		-	2	7		-	

General Inform HERS Index: 500-401 1 Star

### Mechanical Systems Features

Fuel-fired air distribution, Natural gas, 95.0 AFUE. Heating: Electric baseboard or radiant, Electric, 100.0 % EFF. Heating:

Conventional, Natural gas, 0.67 EF, 40.0 Gal. Water Heating:

0.00 CFM. Duct Leakage to Outside: Exhaust Only: 62 cfm, 13.0 watts. Ventilation System:

Cooling: No Heating: Yes Programmable Thermostat:

|--|

Foundation Walls: R-11.1	R-11.1	Rate:	Rate: Htg: 1300 Clg: 1;
Slab:	Slab: R-0.0 Edge, R-0.0 Under	Method:	Method: Blower door test
Lights and Appliance Features	SS		
Percent Interior Lighting: 10.00	ing: 10.00	Range/Oven Fue	Range/Oven Fuel: Natural gas

ignis and Appliance reatures		
Percent Interior Lighting:	10.00	Range/Oven Fuel
Percent Garage Lighting: 0.00	00.0	Clothes Dryer Fuel
Refrigerator (kWh/yr): 691.00	691.00	Clothes Dryer EF
Dishwasher Energy Factor: 0.46	0.46	Ceiling Fan (cfm/Watt)

City, State, Zip

Phone #

Fax#

Company Address

Natural gas

3.01 0.00

TITLE

1300 Clg: 1300 CFM50

NFRC .30 / .29

ž

The Home Energy Rating Standard Disclosure for this home is available from the rating provider

REWRate - Residential Energy Analysis and Rating Software v12.98 This information does not constitute any warranty of energy cost or savings. © 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Certified Energy Rater: Terry Cagle-Kemp Rating Number: 526-1261

Rating Date:

Rating Ordered For: City of St Paul

		9	
Use	MMBtu	Cost	Percent
Heating	62.9	\$652	37%
Cooling	1.5	\$46	3%
Hot Water	21.9	\$197	11%
/ Lights/Appliances	30.9	669\$	39%
Photovoltaics	-0.0	8-0	%0-
Service Charges		\$180	10%
Total		\$1773	100%

This home meets or exceeds the minimum criteria for all of the following:

### Recommend that ductwork be Note: 2<sup>nd</sup> floor currently has 95%+ and ECM Motor with 2" rise above floor. Connect to existing duct work extended to second floor. baseboard electric heat. Location / Notes Phone:651-221-4462 x122 Auditor: Terry Cagle-Kemp other materials in a code legal dump. Install a new ENERGY STAR rated, gasfired, multi-stage burner, forced air furnace with a minimum AFUE rating of years on heat exchangers; 5 years on parts. Include auto setback thermostat controls, vent pipe & new shut-off valve. Rework cold air return if necessary and gas line. New furnace to be vented with PVC piping per manufacturer's Replace water heater with a power-vented water heater with an EF of .65 or to ensure easy access, good fit & easy replacement of air filter. An exterior Remove existing furnace, recycle all metal components and dispose of all return air filter box shall be installed on one side, both sides or bottom of greater. Include pressure & temperature release valve, discharge tube to specifications. New furnace will have minimum limited warranties of 20 new furnace. Seal all exposed duct joints with duct mastic. Remove all within 6" of floor and PVC flue to power vent to exterior. Neighborhood Energy Connection Residential Energy Specification existing cloth duct tape prior to installing mastic. Specification AFUE, Multi-stage, Forced Air Replace Water Heater with Replace Furnace with 95% ower Vented .65 EF Customer: City of Saint Paul 971 Fremont Ave Spec ID#Spec Title urnace Address: 104 8

502	Dense Pack Below Floor and blow above floor to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Floored attics shall be blown below floor boards using the Dense Pack Method to a minimum density 3.5 lbs/ft³. Blow above floorboards to bring below and above total to R-50 or more.	Currently, underside of roof from peak to the floor is insulated with fiberglass batt and vapor barrier and drywall installed over it.
510	Blow Open Attic to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Blow insulation to depth indicated on manufacturer's coverage chart, consistently and evenly to R-50. Insulation in the peak attic must be marked with a ruler to measure depth and a sign with the number of bags used and the date of the installation.	
	Add More Insulation to Slants	Slants are currently insulated with fiberglass batt with vapor barrier and drywall installed over it. More insulation could be added by removing drywall and adding up to 2" rigid insulation (extruded polystyrene or isocyanurate) with edges of insulation sealed with manufacturer approved tape and new drywall installed over the rigid insulation.	
220	Insulate Open Kneewalls with Fiberglass Batts	Alternative to encapsulated fiberglass would be unfaced all kneewalls shall have a top and bottom plate or blockers installed using affiberglass and covered on the rigid material. Air seal all joints, cracks and penetrations in finished materialback with housewrap that is including interior surface to framing connections. Insulate all kneewalls to R-overlapped and sealed with 19 with encapsulated fiberglass. Insulate and weatherstrip kneewall doors.	Alternative to encapsulated fiberglass would be unfaced fiberglass and covered on the back with housewrap that is overlapped and sealed with housewrap tape.

540	Install additional attic ventilation	Venting shall be placed to minimize its impact on the appearance of the house. Where possible, venting shall be installed so that 50% is located high (roof vents or gable vents) and 50% is located low. All vents shall be screened. Vents cut in roof and/or soffits are to be cut full to proper size. All vents shall be properly installed according to manufacturer's specifications. They shall be correctly flashed and roofing tar applied as necessary to ensure a weather-tight seal. Number of vents to be determined by contractor.	
802	Air Seal and Insulate Rim Joist	Seal cracks and holes in rim joist before insulating. Caulk or foam 3 inches of rigid insulation in place. Or, apply two-part foam evenly and consistently according to manufacturer's instructions to insulate to R-10 around basement rim joist.	
908	Air Seal and Insulate Rim Joist using two-part foam	Alte Apply two-part foam evenly and consistently according to manufacturer's instructions to insulate to R-10 around basement rim joist.	Alternative to 802
910	Insulate crawl space ceiling	This lost on the ground. Crawl space shall be insulated by installing 6" and (R19) encapsulated fiberglass batts permanently and directly against the mad floorboards above. Alternatively, spray cavities to R-19.	This is under back entry wall and access would have to be made by knocking hole in foundation from basement
1000	Install ENERGY STAR Rated Kitchen Fan	Install an ENERGY STAR rated exhaust fan connected with insulated rigid ductwork into a dampered vent.	
1010	Install ENERGY STAR Rated 2- stage Bathroom Fan	Install an ENERGY STAR rated two-speed bathroom fan .8 sones or less, with a pre-set low-speed of 10-30 CFM and a high-speed boost capability of 70-110 CFM initiated by a wall switch or motion detector. Vent bathroom fan using rigid duct and insulated with fiberglass and vented out with dampered roof	

		vent.	
1200	Replace incandescents with CFLs	Replace incandescent bulbs with ENERGY STAR rated compact fluorescent lights. Install fixtures that meet the lighting needs of the particular area.	
1210	Install ENERGY STAR Rated Washing Machine	Connect new ENERGY STAR rated clothes washer sized appropriately for the household. Use braided steel water supply lines and a smooth rubber drain line connected to a 2 inch drain with trap. Remove existing washer, recycle all metal components and dispose of all other materials in a code legal dump.	
1212	Install ENERGY STAR Rated Dishwasher	Install ENERGY STAR rated dishwasher including all alterations and connections to plumbing and electric system. Remove existing dishwasher, recycle all metal components and dispose of all other materials in a code legal dump.	
1214	Install ENERGY STAR Rated Refrigerator	Install ENERGY STAR rated refrigerator sized appropriately for the household. Remove existing refrigerator, recycle all metal components and dispose of all other materials in a code legal dump.	

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		All bypasses shall be sealed before insulating in such a manner that the	Currently, underside of roof
		movement of air through the bypass is essentially stopped. "Essentially	from peak to the floor is
	Dense Pack Below Floor and	stopped" means that air leakage will not be detected by an infrared scan	insulated with fiberglass batt
205	blow above floor to R-50	when the house is pressurized to 30 Pascals. Floored attics shall be blown	and vapor barrier and drywall
-		below floor boards using the Dense Pack Method to a minimum density 3.5	installed over it.
	-	lbs/ft³. Blow above floorboards to bring below and above total to R-50 or	
		more.	
		All bypasses shall be sealed before insulating in such a manner that the	
		movement of air through the bypass is essentially stopped. "Essentially	
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510	Blow Open Attic to R-50	when the house is pressurized to 30 Pascals. Blow insulation to depth	
		indicated on manufacturer's coverage chart, consistently and evenly to R-50.	
		Insulation in the peak attic must be marked with a ruler to measure depth	
		and a sign with the number of bags used and the date of the installation.	
		Slants are currently insulated with fiberglass batt with vapor barrier and	
		drywall installed over it. More insulation could be added by removing drywall	
	Add More Insulation to Slants	and adding up to 2" rigid insulation (extruded polystyrene or isocyanurate)	,
		with edges of insulation sealed with manufacturer approved tape and new	
		drywall installed over the rigid insulation.	
			Alternative to encapsulated
			fiberglass would be unfaced
220	Insulate Open Kneewalls with	All kneewalls shall have a top and bottom plate or blockers installed using afiberglass and covered on the	fiberglass and covered on the
	Fiberglass Batts	rigid material. Air seal all joints, cracks and penetrations in finished materialback with housewrap that is	back with housewrap that is
		including interior surface to framing connections. Insulate all kneewalls to R-overlapped and sealed with	overlapped and sealed with
		19 with encapsulated fiberglass. Insulate and weatherstrip kneewall doors.	housewrap tape.

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		Vent.	
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1214	Install ENERGY STAR Rated Refrigerator	Install ENERGY STAR rated refrigerator sized appropriately for the household. Remove existing refrigerator, recycle all metal components and dispose of all other materials in a code legal dump.	

### 03/15/12 ACTIVATED CHARCOAL RADON TEST #6102591

Radon Test Result: 1.9 ±0.2 pCi/L

Test Started 03/08/12 at 1:00 pm Test Ended 03/12/12 at 2:00 pm Closed house conditions maintained during test.

**Location Basement** 

Iddidudllumblud CITY OF ST PAUL HRA 971 FREMONT SAINT PAUL, MN 55102

### INTERPRETING YOUR TEST RESULT

The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short—term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by calling your **state radon officer at 800–798–9050**. Or call the "Radon Fix–It Line" at 800–644–6999 Monday thru Friday between NOON and 8 pm EST

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

### **READ THIS FIRST**

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

### NEXT...PLEASE...READ

everything under the heading

### INTERPRETING YOUR TEST RESULT

### Your health risk

The primary health risk from long—term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

### What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

### Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short—term tests conducted from 48 hours up to 90 days, and long—term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short—term 'worst—case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed—building conditions, in the lowest lived—in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst—case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

\* Your state has designated a radon officer to assist citizens with questions on radon. Most offer free information on radon and radon reduction techniques, and most keep a list of qualified radon testing and mitigation businesses. Your radon officer can also provide the phone number of your regional USEPA office.

### 03/15/12 ACTIVATED CHARCOAL RADON TEST #6102597

Radon Test Result: 1.1 ±0.1 pCi/L

Test Started 03/08/12 at 1:00 pm Test Ended 03/12/12 at 2:00 pm Closed house conditions maintained during test.

### INTERPRETING YOUR TEST RESULT

The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short—term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

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### Midwest Environmental Consulting, L.L.C.



January 28, 2012

Rennie Smith All Phase Companies, Inc. 404A St. Croix Trail North Lakeland MN 55043

RE:

HUD Lead-Based Paint Inspection and Risk Assessment at the Single Family Residential Property, 971 Fremont Avenue, St. Paul, Minnesota (All Phase Phone: 651-436-2930)

Dear Rennie Smith:

At your request, Midwest Environmental Consulting, L.L.C. (MEC) performed a HUD lead-based paint inspection and risk assessment of the single family residential located at 971 Fremont Avenue, St. Paul, Minnesota on January 25, 2012.

Andrew Myers, Environmental Project Manager with MEC and licenced lead risk assessor (MN LR #578) performed all field work associated with this project. MEC credentials can be found in Appendix A.

The purpose of this project was to determine whether lead-based paint or other lead hazards are present on the interior or exterior surfaces of the residential property. This report contains the results of the HUD lead-based paint inspection and risk assessment.

The inspection was conducted following the Housing and Urban Development (HUD) "Guidelines for the Evaluation and Control of Lead-Based Paint in Housing," using the October 1997 revised Chapter 7 protocols. The sampling criteria used are those outlined in the HUD Standards 24 CFR Part 35 et al, "Requirements for Notification Evaluation and Education of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance." Also included, is an evaluation for lead dust hazards and bare soil hazards as part of the risk assessment.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing.

### SITE DESCRIPTION

The single family property located at 971 Fremont Avenue, St. Paul, Minnesota is a two story wood framed structure on a concrete foundation/basement constructed in

approximately the 1940's. The interior walls and ceilings on the main level are primarily plaster with some areas of drywall. The 2<sup>nd</sup> Floor and basement level have wood paneling and some drywall. The main level has newer vinyl insert windows in the original jambs. The 2<sup>nd</sup> Floor and basement have original vintage wood windows. the basement level has some moisture infiltration and microbial damage to surfaces. The exterior has metal siding and metal cladding on soffits, fascia and trim over original painted wood. There is a detached wood framed garage on a concrete slab. The exterior also has metal siding and low maintenance soffit, fascia and trim. The garage siding is homogeneous to the house siding.

Bare soil was not observed due to snow cover. The property is currently vacant.

### **RESULTS OF PAINT INSPECTION**

MEC used a paint inspection sampling strategy as described in the HUD *Guidelines* (1995 and revised Chapter 7 in October 1997). The results of portable X-Ray Fluorescence (XRF) spectrum analysis of representative building components in each functional area or room are shown in Appendix B. Results are organized and shown in actual sequence of analysis. All tests were made using a Niton® XLp 303 X-Ray Fluorescence Spectrum Analyzers (Serial # 13754 and Serial # 8790).

XRF analytical results in Appendix B, in the column labeled "Results" represent lead concentrations per square centimeter of painted surface (mg/cm²).

HUD regulations 24 CFR Part 35 et al, the HUD *Guidelines* and the Minnesota Department of Health (MDH) define the paint action level as lead concentrations at or above the level of 1.0 mg/cm<sup>2</sup> when measured with a portable XRF instrument (0.5% by weight when measured by laboratory methods).

The lead-based paint risk assessment protocol described in the HUD *Guidelines* and the EPA regulations rely on evaluation of surface coatings meeting the definition of poor, planned renovations, presence of dust and soil above current EPA and Minnesota Department of Health (MDH) Standards.

Tests are performed on each test combination. A test combination consists of unique combinations of substrate, color, building component, and location.

XRF results are classified as positive or negative. A positive classification indicates that lead is present on the testing combination at or above the HUD standards. It's important to note that the limited inspection of surfaces tested only applies to those surfaces areas tested and does not meet the requirements of a full HUD lead-based paint inspection and those surface areas not tested would be assumed to contain lead-based paint.

Appendix B includes a record of XRF calibration checks. Those checks were performed on thin films supplied by the XRF manufacturer; they contain known concentrations of lead. The graphs in that appendix show the variation of quality control with time. The assays in the table of raw data (Appendix B) that are labeled "Calibrate" indicate that they are for quality control. Additional quality control data and information are available to you upon request.

Side A: South, faces Fremont Avenue

Side B: West, adjoins faces residential property

Side C: North, faces alley & residential property

Side D: East, adjoins residential property

Specific building components determined to have a lead concentration above the action level of (1.0 mg/cm²) are listed below:

LOCATION	COMPONENT
Porch	Painted wood window parting bead
Porch	Painted wood ceiling
Bathroom	Bathtub
Basement - Room 1	Painted wood window
Laundry Room	Painted wood window
Laundry Room	Painted wood closet door & door components
Stairway to 2 <sup>nd</sup> Floor	Painted wood window parting beads
Bedroom 4	Painted wood window parting beads
Exterior	Painted wood doors and door components (both front porch and back entry)
Exterior- Foundation	Painted concrete foundation
Exterior	Metal window components (depth index indicates lead beneath metal surfaces)
Exterior	Metal soffits & fascia (depth index indicates lead beneath metal surfaces)
Garage	Metal window components (depth index indicates lead beneath metal surfaces)
Bedroom 4	Painted wood baseboards (including closet)

Also included in Appendix B of this report is a rating of the condition of paint on components (column titled "Condition"). Comments on the condition include:

Intact: good condition; Fair: less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards, trim, etc.; Poor: more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface areas, or more than 10% damage to small surface areas.

### RESULTS OF LEAD RISK ASSESSMENT

The risk assessment portion of this investigation involved two major phases: collecting information about the property through use of a visual inspection of the dwelling; and reviewing paint test data, and visual assessment notes in order to determine the type, location, and number of samples needed to further identify lead hazards at the property. These samples may consist of paint, dust, soil, and water.

- The date of construction of the residence is approximately the 1940's.
- The property is a single family residential structure.
- Interior walls on the main level is primarily plaster with some drywall. The basement and 2<sup>nd</sup> level have wood paneling and some drywall.
- The main level has newer vinyl inserts in original jambs. The 2<sup>nd</sup> Floor and basement are original windows.
- The exterior siding is metal with metal cladding on soffits, fascia & trim over original painted wood.
- There is a detached wood framed & metal sided garage with alley access.
- Bare soil was not observed due to snow cover.
- The property is currently vacant.

### Visual Inspection

MEC conducted an inspection of painted and varnished surfaces on the interior and exterior of the residence. Emphasis was placed on chewable surfaces within 5 feet of the ground or floor.

The results of the visual inspection indicate that the interior and the exterior of the structure is mainly in fair condition with some components in poor or intact condition.

Please note, however, the condition report within the XRF table for painted or varnished surfaces found to be fair or poor, that were below the 1.0 mg/cm² action level.

### **Environmental Sampling Plan**

Based on the location of lead-based paint, deteriorated lead-based paint, and information gathered during the visual inspection, MEC formulated the following environmental sampling plan to identify other lead hazards on this property. Water samples were not collected as they were not part of the scope of work for this project. Bare soil was not observed due to snow cover and no bare soil sample was collected.

Samples were collected and delivered to EMSL Laboratory (ELLAP 163162), Minneapolis, Minnesota where they were prepared and analyzed using current appropriate protocols for lead. Laboratory results for environmental samples may be found in Appendix C.

Analytical results are reported below for each sample and compared to standard action levels that have been identified for this project.

SAMPLE# DATE	LOCATION	RESULT	PROJECT ACTION LEVEL
502/0112H-W1 1/16/12	Living Room, Side A, floor by front door	<10 µg/ft²	40 µg/ft²
502/011H-W2 1/16/12	Living Room, Side D, window sill	800 µg/ft²	250 H9/ft²
502/0112H-W3 1/16/12	Kitchen, floor by back entry	690 µg/ff²	AO; µg/ft <sup>a</sup>
502/0112H-W4 1/16/12	Bedroom 1, Side A, window trough	190 µg/ft²	400 µg/ft²
502/0112H-W5 1/16/12	Bedroom 1, Side A, floor under window	<10 µg/ft²	40 μg/ft²
502/0112H-W6 1/16/12	Bedroom 2, Side C, window sill	<40 µg/ft²	250 µg/ft²
502/0112H-W7 1/16/12	Bedroom 2, Side C, floor under window	<10 µg/ft²	40 μg/ft²
502/0112H-W8 1/16/12	2 <sup>nd</sup> Floor Bedroom 3, Side A, window trough	84 000 µg/ff <sup>2</sup>	40014 <b>9</b> /ft <sup>2</sup>
502/0112H-W9 1/16/12	2 <sup>nd</sup> Floor Bedroom 3, Side A, floor under window	55 Hg/ft <sup>2</sup>	40.ue/ff²

502/0112H-W10 1/16/12	Basement, bottom of stairs, floor	37 μg/ft²	40 μg/ft²
502/0112H-W11 1/16/12	Blind Field Blank	<10 µg/ft²	# 14 to 10 t

<sup>\*</sup> Unit Abbreviations:

Dust wipe were collected from the residence, however, water and sodium rhodizonate swabs were not collected as part of this project. Bare soil was observed on the day of the site evaluation. Bare soil was not observed due to snow cover and no bare soil samples were collected.

### **RECOMMENDATIONS**

Lead-based paint or lead hazards were found during the inspection and risk assessment of the property including painted wood porch ceiling, original vintage interior & exterior window components, bathtub, painted wood interior & exterior door components.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing.

At the request of the City of St. Paul, only abatement options are provided for lead hazards identified during this evaluation. Abatement options can include removal of building components to the substrate and replacement with new lead free products; enclosure of building components under dust tight barriers; encapsulation; or removal of coatings to the substrates and re-coating with lead free coatings.

### Porch:

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood ceiling: In fair condition.

- Option 1: Remove wall system to the framing material using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier and include into an operation & maintenance plan with ongoing monitoring.
- Option 3: Encapsulate with an approve lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance

ug/ft2 - micrograms per square foot

Plan with ongoing monitoring.

• Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

### Bathroom:

Bathtub: In poor condition.

 Option 1: Enclose under a lead free tub surround system and include into an Operation & Maintenance Plan with ongoing monitoring.

• Option 2: Remove tub using Lead Safe Work Practices and replace with new lead free products.

### Basement - Room 1:

Painted wood window: In poor condition.

 Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.

 Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

### Laundry:

Painted wood window: In poor condition.

 Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.

• Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood closet door & door components: In poor condition.

 Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.

 Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

### Stairway to 2<sup>nd</sup> Floor:

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

### Bedroom 4:

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices

and re-coat with lead free coatings.

### Exterior:

Painted wood doors and door components (front porch & rear entry): In poor condition.

 Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.

• Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted concrete foundation: In poor condition.

Option 1: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coating.

• Option 2: Encapsulate with a lead abatement approved encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.

Metal window cladding (depth index indicates lead beneath the metal surfaces):In intact condition.

Option 1: Include into an Operation & Maintenance Plan with ongoing monitoring.
 (The metal cladding is already an enclosure). Make sure that seams and seals are maintained in a sealed condition using elastomeric caulking.

Option 2: Remove metal cladding using Lead Safe Work Practices and replace

with new lead free products.

• Option 3: Remove cladding & coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Metal cladding on soffits, fascia & trim (depth index indicates lead beneath metal surfaces: In intact condition.

 Option 1: Include into an Operation & Maintenance Plan with ongoing monitoring. (The metal cladding is already an enclosure). Make sure that seams and seals are maintained in a sealed condition using elastomeric caulking.

Option 2: Remove metal cladding using Lead Safe Work Practices and replace

with new lead free products.

• Option 3: Remove cladding & coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Note: The exterior of the garage is homogeneous to that of the house

### Lead Dust:

Dust was identified as a lead hazard on window and floor surfaces tested. All floors and window systems should be cleaned and made smooth and cleanable. If planned renovation or work activity will disturb lead coated surfaces, lead safe work practices should be followed, which include requirements for clean up of the work area and

clearance testing.

### Bare Soil:

Bare soil was not observed due to snow cover. If bare soil is present it is assumed to be above the MDH standard of 100 parts per million.

- Abatement Option 1: Removal of bare soil and replacement with new soil of 25 parts per million of lead or less.
- <u>Abatement Option 2:</u> Covering bare soil with asphalt, concrete or other impervious coating.

When qualified contractors are performing the planned renovation/remodeling activities, precautions should be properly done to minimize the potential for lead-based paint contamination to the workers, occupants and the environment.

### DISCUSSION

The mere presence of lead-coated surfaces does not create a lead hazard.

Maintenance of lead containing coatings will prevent lead from becoming a hazard.

Lead-based paint above the action level of 1.0 mg/cm² was found on surfaces tested.

Because exterior surfaces are to be remediated and lead-coatings are present, covering the ground and providing adequate protection to soil is very important. Bare soil is not currently present and steps should be taken to keep bare soil from being generated.

Dust wipe samples collected found lead dust levels above the action levels on floor and window surfaces tested as defined by MDH, HUD and EPA in the sampling locations tested. Contractors will be required to clean all floor systems and window surfaces throughout the complex for lead hazards in dust following and as a part of the planned restoration.

The preceding lead reduction recommendations include different ways to treat each lead hazard that was identified by the risk assessment/inspection. The most effective treatments are considered abatement and require little or no ongoing maintenance to preserve a lead safe environment. The less effective treatments are called interim controls and these treatments require an increased amount of ongoing maintenance to preserve a lead safe environment.

If no lead dust, soil, or lead-based paint is found, then no monitoring is required.

If no hazards are found, but lead-based paint is found, then reevaluation should occur every three years, and an owner's visual survey should occur annually.

If lead dust, soil, or lead-based paint hazards are found to be present, choosing the option with removal of all lead-based paint will result in no monitoring requirements. If abatement options are chosen that include enclosure, then no re-evaluation is required, but the owner should conduct visual surveys every year to ensure the enclosure has not failed. If the interim control options (stabilize and paint) are chosen, then re-evaluation should occur after the first year and then every two years after that. Visual surveys by the owner should occur annually.

If lead dust levels are found to be more than ten times the standard levels, then reevaluation after interim control measures should occur six months after the hazard reduction.

In general, all painted surfaces should be monitored. A negative result does not necessarily indicate that no lead is present in that surface, but rather indicates that any lead present in that surface does not rise above the 1.0 mg/cm² threshold in the areas tested. Therefore, all painted surfaces should be maintained in accordance with the Minnesota Department of Health standards.

### **ROUGH ESTIMATED COSTS:**

- Work site preparation for interior, approximately \$75.00 to \$250.00 per room.
- Window replacement, approximately \$150.00 and up, depending on style.
- Exterior preparation approximately \$35.00 to \$75.00 per component (i.e., windows, doors), removal or enclosure.
- Work area cleaning: \$0.15 to \$0.35 per square foot.
- Paint stabilization: \$0.20 to \$0.65 per square foot.
- Removal: Paint chemical stripper: \$0.65 to \$1.50 square foot.
- Soil Remediation:
  - a. Clean-up of visible exterior paint chips: \$0.90 to \$1.35 square foot.
  - b. Seed and tack grass: \$0.45 to \$0.75 square foot.
  - c. Sod: \$1.25 to \$3.30 square foot.
  - d. Regrade at foundation and sod: \$3.00 to \$5.00 square foot.
  - e. Mulch 4": \$0.50 to \$0.90 square foot.
  - f. Concrete: \$4.50 to \$8.00 square foot.
  - g. Replace soil: \$42.00 to \$65.00 cubic yard.

If work is going to be performed on these surfaces, individuals and/or contractors should be informed of the results of testing. At a minimum, the person(s) performing the work should follow the requirements of the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1926.62, Lead in the Construction Industry.

For the protection of the occupants and workers, and because of the use of federal funds, you are required by the HUD rules to use qualified firms who are knowledgeable about the hazards associated with lead. Supervisor should be licensed and workers will be required to be licensed or certified, as MEC understands the scope of work.

Please maintain a copy of the lead inspection/risk assessment report for your records and provide a copy of the report to any contractors that may be involved in any future renovations or remodeling projects.

A copy of this lead inspection/risk assessment summary must be provided to purchasers or lessees (tenants) of this property under Federal Law (24 CFR Part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract.

The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

It has been our pleasure to provide this service to you and your organization. Please contact me if you have questions relating to any aspect of this work.

Respectfully submitted,

Andrew Myers

Environmental Services Project Manager

### APPENDIX A INSPECTOR CREDENTIALS

## Minnesota Department of Health

has authorized

Midwest Environmental Consulting, LLC 145 2nd Ave SE Cambridge, Minnesota 55008 in accordance with Minnesota Statutes, section 144.9505 and Minnesota Rules, part 4761.2200, to practice in the State of Minnesota as a

# Certified Lead Firm

License No: LF551 Expires 03/28/2012 This certificate is nontransferable.

Linda B. Bruemmer, Director Division of Environmental Health



Director, Env. Health Div.



Risk Assessor
Licensed by:
State of Minnesota
Department of Health

License No. LR578 Expires 08/25/2012

Andrew J Myers 210 2nd St N New Prague, MN 56071

approximately the 1940's. The interior walls and ceilings on the main level are primarily plaster with some areas of drywall. The 2<sup>nd</sup> Floor and basement level have wood paneling and some drywall. The main level has newer vinyl insert windows in the original jambs. The 2<sup>nd</sup> Floor and basement have original vintage wood windows, the basement level has some moisture infiltration and microbial damage to surfaces. The exterior has metal siding and metal cladding on soffits, fascia and trim over original painted wood. There is a detached wood framed garage on a concrete slab. The exterior also has metal siding and low maintenance soffit, fascia and trim. The garage siding is homogeneous to the house siding.

Bare soil was not observed due to snow cover. The property is currently vacant.

### RESULTS OF PAINT INSPECTION

MEC used a paint inspection sampling strategy as described in the HUD *Guidelines* (1995 and revised Chapter 7 in October 1997). The results of portable X-Ray Fluorescence (XRF) spectrum analysis of representative building components in each functional area or room are shown in Appendix B. Results are organized and shown in actual sequence of analysis. All tests were made using a Niton® XLp 303 X-Ray Fluorescence Spectrum Analyzers (Serial # 13754 and Serial # 8790).

XRF analytical results in Appendix B, in the column labeled "Results" represent lead concentrations per square centimeter of painted surface (mg/cm²).

HUD regulations 24 CFR Part 35 et al, the HUD *Guidelines* and the Minnesota Department of Health (MDH) define the paint action level as lead concentrations at or above the level of 1.0 mg/cm<sup>2</sup> when measured with a portable XRF instrument (0.5% by weight when measured by laboratory methods).

The lead-based paint risk assessment protocol described in the HUD *Guidelines* and the EPA regulations rely on evaluation of surface coatings meeting the definition of poor, planned renovations, presence of dust and soil above current EPA and Minnesota Department of Health (MDH) Standards.

Tests are performed on each test combination. A test combination consists of unique combinations of substrate, color, building component, and location.

XRF results are classified as positive or negative. A positive classification indicates that lead is present on the testing combination at or above the HUD standards. It's important to note that the limited inspection of surfaces tested only applies to those surfaces areas tested and does not meet the requirements of a full HUD lead-based paint inspection and those surface areas not tested would be assumed to contain lead-based paint.

Appendix B includes a record of XRF calibration checks. Those checks were performed on thin films supplied by the XRF manufacturer; they contain known concentrations of lead. The graphs in that appendix show the variation of quality control with time. The assays in the table of raw data (Appendix B) that are labeled "Calibrate" indicate that they are for quality control. Additional quality control data and information are available to you upon request.

Side A: South, faces Fremont Avenue

Porch

Bathroom

Basement - Room 1

Stairway to 2<sup>nd</sup> Floor

Exterior- Foundation

Laundry Room

Laundry Room

Bedroom 4

Exterior

Exterior

Exterior

Garage

Bedroom 4

Side B: West, adjoins faces residential property Side C: North, faces alley & residential property Side D: East, adjoins residential property

Specific building components determined to have a lead concentration above the action

level of (1.0 mg/cm²) are listed	below:		
LOCATION		COMPONENT	
Porch	Painted wood	window parting bead	

Painted wood ceiling

Painted wood window

Painted wood window

porch and back entry)

Painted concrete foundation

beneath metal surfaces)

beneath metal surfaces)

beneath metal surfaces)

Painted wood closet door & door components

Painted wood doors and door components (both front

Metal window components (depth index indicates lead

Metal window components (depth index indicates lead

Metal soffits & fascia (depth index indicates lead

Painted wood baseboards (including closet)

Painted wood window parting beads

Painted wood window parting beads

Bathtub

Also included in Appendix B of this report is a rating of the condition of paint on components (column titled "Condition"). Comments on the condition include:

Intact: good condition; Fair: less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards, trim, etc.; Poor: more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface areas, or more than 10% damage to small surface areas.

### RESULTS OF LEAD RISK ASSESSMENT

The risk assessment portion of this investigation involved two major phases: collecting information about the property through use of a visual inspection of the dwelling; and reviewing paint test data, and visual assessment notes in order to determine the type, location, and number of samples needed to further identify lead hazards at the property. These samples may consist of paint, dust, soil, and water.

- The date of construction of the residence is approximately the 1940's.
- The property is a single family residential structure.
- Interior walls on the main level is primarily plaster with some drywall. The basement and 2<sup>nd</sup> level have wood paneling and some drywall.
- The main level has newer vinyl inserts in original jambs. The 2<sup>nd</sup> Floor and basement are original windows.
- The exterior siding is metal with metal cladding on soffits, fascia & trim over original painted wood.
- There is a detached wood framed & metal sided garage with alley access.
- Bare soil was not observed due to snow cover.
- The property is currently vacant.

### Visual Inspection

MEC conducted an inspection of painted and varnished surfaces on the interior and exterior of the residence. Emphasis was placed on chewable surfaces within 5 feet of the ground or floor.

The results of the visual inspection indicate that the interior and the exterior of the structure is mainly in fair condition with some components in poor or intact condition.

Please note, however, the condition report within the XRF table for painted or varnished surfaces found to be fair or poor, that were below the 1.0 mg/cm<sup>2</sup> action level.

### **Environmental Sampling Plan**

Based on the location of lead-based paint, deteriorated lead-based paint, and information gathered during the visual inspection, MEC formulated the following environmental sampling plan to identify other lead hazards on this property. Water samples were not collected as they were not part of the scope of work for this project. Bare soil was not observed due to snow cover and no bare soil sample was collected.

Samples were collected and delivered to EMSL Laboratory (ELLAP 163162), Minneapolis, Minnesota where they were prepared and analyzed using current appropriate protocols for lead. Laboratory results for environmental samples may be found in Appendix C.

Analytical results are reported below for each sample and compared to standard action levels that have been identified for this project.

SAMPLE # DATE	LOCATION	RESULT	PROJECT ACTION LEVEL
502/0112H-W1 1/16/12	Living Room, Side A, floor by front door	<10 µg/ft²	40 µg/ft²
502/011H-W2 1/16/12	Living Room, Side D, window sill	800 Lg/ft²	250 Lg/ft²
502/0112H-W3 1/16/12	Kitchen, floor by back entry	690. <u>Lg/ff</u> *	40;µg/ft <sup>3</sup>
502/0112H-W4 1/16/12	Bedroom 1, Side A, window trough	190 µg/ft²	400 µg/ft²
502/0112H-W5 1/16/12	Bedroom 1, Side A, floor under window	<10 µg/ft²	40 μg/ft²
502/0112H-W6 1/16/12	Bedroom 2, Side C, window sill	<40 µg/ft²	250 µg/ft²
502/0112H-W7 1/16/12	Bedroom 2, Side C, floor under window	<10 µg/ft²	40 μg/ft²
502/0112H-W8 1/16/12	2 <sup>nd</sup> Floor Bedroom 3, Side A, window trough	84 000 µg/ft <sup>2</sup>	4001H9/ft²
502/0112H-W9 1/16/12	2 <sup>nd</sup> Floor Bedroom 3, Side A, floor under window	55 Ug/ft <sup>2</sup>	40. µg/ff²

502/0112H-W10 1/16/12	Basement, bottom of stairs, floor	37 μg/ft²	40 μg/ft²
502/0112H-W11 1/16/12	Blind Field Blank	<10 µg/ft²	

<sup>\*</sup> Unit Abbreviations:

Dust wipe were collected from the residence, however, water and sodium rhodizonate swabs were not collected as part of this project. Bare soil was observed on the day of the site evaluation. Bare soil was not observed due to snow cover and no bare soil samples were collected.

### RECOMMENDATIONS

Lead-based paint or lead hazards were found during the inspection and risk assessment of the property including painted wood porch ceiling, original vintage interior & exterior window components, bathtub, painted wood interior & exterior door components.

According to HUD protocol, if the first 5 of a building component are identified as positive for lead-based paint, the remaining like components are assumed to be lead-based paint containing.

At the request of the City of St. Paul, only abatement options are provided for lead hazards identified during this evaluation. Abatement options can include removal of building components to the substrate and replacement with new lead free products; enclosure of building components under dust tight barriers; encapsulation; or removal of coatings to the substrates and re-coating with lead free coatings.

### Porch:

Painted wood window components: In poor condition.

• Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.

• Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood ceiling: In fair condition.

- Option 1: Remove wall system to the framing material using Lead Safe Work Practices and replace with new lead free products.
- Option 2: Enclose under a dust tight barrier and include into an operation & maintenance plan with ongoing monitoring.
- Option 3: Encapsulate with an approve lead abatement encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance

ug/ft<sup>2</sup> - micrograms per square foot

Plan with ongoing monitoring.

• Option 4: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

### Bathroom:

Bathtub: In poor condition.

• Option 1: Enclose under a lead free tub surround system and include into an Operation & Maintenance Plan with ongoing monitoring.

Option 2: Remove tub using Lead Safe Work Practices and replace with new lead free products.

### Basement - Room 1:

Painted wood window: In poor condition.

• Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.

 Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

### Laundry:

Painted wood window: In poor condition.

• Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.

• Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

Painted wood closet door & door components: In poor condition.

 Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.

• Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

### Stairway to 2<sup>nd</sup> Floor:

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coatings.

### Bedroom 4:

Painted wood window components: In poor condition.

- Option 1: Remove window components to raw openings using Lead Safe Work Practices and replace with new lead free window components.
- Option 2: Remove coatings to bare substrate using Lead Safe Work Practices

and re-coat with lead free coatings.

### Exterior:

Painted wood doors and door components (front porch & rear entry): In poor condition.

 Option 1: Remove door components using Lead Safe Work Practices and replace with new lead free door components.

 Option 2: Remove coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Painted concrete foundation: In poor condition.

 Option 1: Remove coatings to bare substrate using Lead Safe Work Practices and re-coat with lead free coating.

Option 2: Encapsulate with a lead abatement approved encapsulant such as Safe Encasement® or equivalent and include into an Operation & Maintenance Plan with ongoing monitoring.

Metal window cladding (depth index indicates lead beneath the metal surfaces):In intact condition.

Option 1: Include into an Operation & Maintenance Plan with ongoing monitoring.
 (The metal cladding is already an enclosure). Make sure that seams and seals are maintained in a sealed condition using elastomeric caulking.

Option 2: Remove metal cladding using Lead Safe Work Practices and replace

with new lead free products.

• Option 3: Remove cladding & coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Metal cladding on soffits, fascia & trim (depth index indicates lead beneath metal surfaces: In intact condition.

 Option 1: Include into an Operation & Maintenance Plan with ongoing monitoring. (The metal cladding is already an enclosure). Make sure that seams and seals are maintained in a sealed condition using elastomeric caulking.

Option 2: Remove metal cladding using Lead Safe Work Practices and replace

with new lead free products.

Option 3: Remove cladding & coatings to bare substrates using Lead Safe Work Practices and re-coat with lead free coatings.

Note: The exterior of the garage is homogeneous to that of the house

### Lead Dust:

Dust was identified as a lead hazard on window and floor surfaces tested. All floors and window systems should be cleaned and made smooth and cleanable. If planned renovation or work activity will disturb lead coated surfaces, lead safe work practices should be followed, which include requirements for clean up of the work area and

clearance testing.

### Bare Soil:

Bare soil was not observed due to snow cover. If bare soil is present it is assumed to be above the MDH standard of 100 parts per million.

Abatement Option 1: Removal of bare soil and replacement with new soil of 25 parts per million of lead or less.

• <u>Abatement Option 2:</u> Covering bare soil with asphalt, concrete or other impervious coating.

When qualified contractors are performing the planned renovation/remodeling activities, precautions should be properly done to minimize the potential for lead-based paint contamination to the workers, occupants and the environment.

### DISCUSSION

The mere presence of lead-coated surfaces does not create a lead hazard.

Maintenance of lead containing coatings will prevent lead from becoming a hazard.

Lead-based paint above the action level of 1.0 mg/cm² was found on surfaces tested.

Because exterior surfaces are to be remediated and lead-coatings are present, covering the ground and providing adequate protection to soil is very important. Bare soil is not currently present and steps should be taken to keep bare soil from being generated.

Dust wipe samples collected found lead dust levels above the action levels on floor and window surfaces tested as defined by MDH, HUD and EPA in the sampling locations tested. Contractors will be required to clean all floor systems and window surfaces throughout the complex for lead hazards in dust following and as a part of the planned restoration.

The preceding lead reduction recommendations include different ways to treat each lead hazard that was identified by the risk assessment/inspection. The most effective treatments are considered abatement and require little or no ongoing maintenance to preserve a lead safe environment. The less effective treatments are called interim controls and these treatments require an increased amount of ongoing maintenance to preserve a lead safe environment.

If no lead dust, soil, or lead-based paint is found, then no monitoring is required.

If no hazards are found, but lead-based paint is found, then reevaluation should occur every three years, and an owner's visual survey should occur annually.

If lead dust, soil, or lead-based paint hazards are found to be present, choosing the option with removal of all lead-based paint will result in no monitoring requirements. If abatement options are chosen that include enclosure, then no re-evaluation is required, but the owner should conduct visual surveys every year to ensure the enclosure has not failed. If the interim control options (stabilize and paint) are chosen, then re-evaluation should occur after the first year and then every two years after that. Visual surveys by the owner should occur annually.

If lead dust levels are found to be more than ten times the standard levels, then reevaluation after interim control measures should occur six months after the hazard reduction.

In general, all painted surfaces should be monitored. A negative result does not necessarily indicate that no lead is present in that surface, but rather indicates that any lead present in that surface does not rise above the 1.0 mg/cm² threshold in the areas tested. Therefore, all painted surfaces should be maintained in accordance with the Minnesota Department of Health standards.

### **ROUGH ESTIMATED COSTS:**

- Work site preparation for interior, approximately \$75.00 to \$250.00 per room.
- Window replacement, approximately \$150.00 and up, depending on style.
- Exterior preparation approximately \$35.00 to \$75.00 per component (i.e., windows, doors), removal or enclosure.
- Work area cleaning: \$0.15 to \$0.35 per square foot.
- Paint stabilization: \$0.20 to \$0.65 per square foot.
- Removal: Paint chemical stripper: \$0.65 to \$1.50 square foot.
- Soil Remediation:
  - a. Clean-up of visible exterior paint chips: \$0.90 to \$1.35 square foot.
  - b. Seed and tack grass: \$0.45 to \$0.75 square foot.
  - c. Sod: \$1.25 to \$3.30 square foot.
  - d. Regrade at foundation and sod: \$3.00 to \$5.00 square foot.
  - e. Mulch 4": \$0.50 to \$0.90 square foot.
  - f. Concrete: \$4.50 to \$8.00 square foot.
  - g. Replace soil: \$42.00 to \$65.00 cubic yard.

If work is going to be performed on these surfaces, individuals and/or contractors should be informed of the results of testing. At a minimum, the person(s) performing the work should follow the requirements of the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1926.62, Lead in the Construction Industry.

For the protection of the occupants and workers, and because of the use of federal funds, you are required by the HUD rules to use qualified firms who are knowledgeable about the hazards associated with lead. Supervisor should be licensed and workers will be required to be licensed or certified, as MEC understands the scope of work.

Please maintain a copy of the lead inspection/risk assessment report for your records and provide a copy of the report to any contractors that may be involved in any future renovations or remodeling projects.

A copy of this lead inspection/risk assessment summary must be provided to purchasers or lessees (tenants) of this property under Federal Law (24 CFR Part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract.

The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

It has been our pleasure to provide this service to you and your organization. Please contact me if you have questions relating to any aspect of this work.

Respectfully submitted,

Andrew Myers

Environmental Services Project Manager

### APPENDIX A

### INSPECTOR CREDENTIALS

## Minnesota Department of Health

has authorized

Midwest Environmental Consulting, LLC 145 2nd Ave SE

Cambridge, Minnesota 55008

in accordance with Minnesota Statutes, section 144.9505 and Minnesota Rules, part 4761.2200, to practice in the State of Minnesota as a

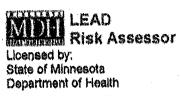
# Certified Lead Firm

License No: LF551 Expires 03/28/2012 This certificate is nontransferable.

Linda B. Bruemmer, Director Division of Environmental Health



Director, Env. Health Div.



License No. LR678 Expires 08/25/2012

Andrew J Myers 210 2nd St N New Prague, MN 56071

### Andrew J. Myers



has completed the Minnesota-Approved Lead Training course entitled:

Lead Risk Assessor Refresher Training

August 25, 2011

given by

Midwest Environmental Consulting, L.L. 145 - 2<sup>rd</sup> Avenue SE, Cambridge, MN 55008 Prove: 763.691.0111 SUCCESSFULLY PASSED THE EXAMINATION ON August 25, 2011, IN Cambridge, MINNESOTA

IDENTIFICATION NUMBER: MEC/LRAR 0847 Expiration Date: August 25, 2012 MDH Permit Number: RAR-006

Course Director/Primary Instructor

Approved by the State of Minnesota under Minnesota Rules, parts 4761.2000 to 4761.2700.



Lead Inspector Independent Examination

1-0031

121 East Seventh Place, Suite 220 • St. Paul • Minnesona 55101 • (651) 215-0700

This certifies that

## Andrew Myers

has successfully passed the required independent examination for:

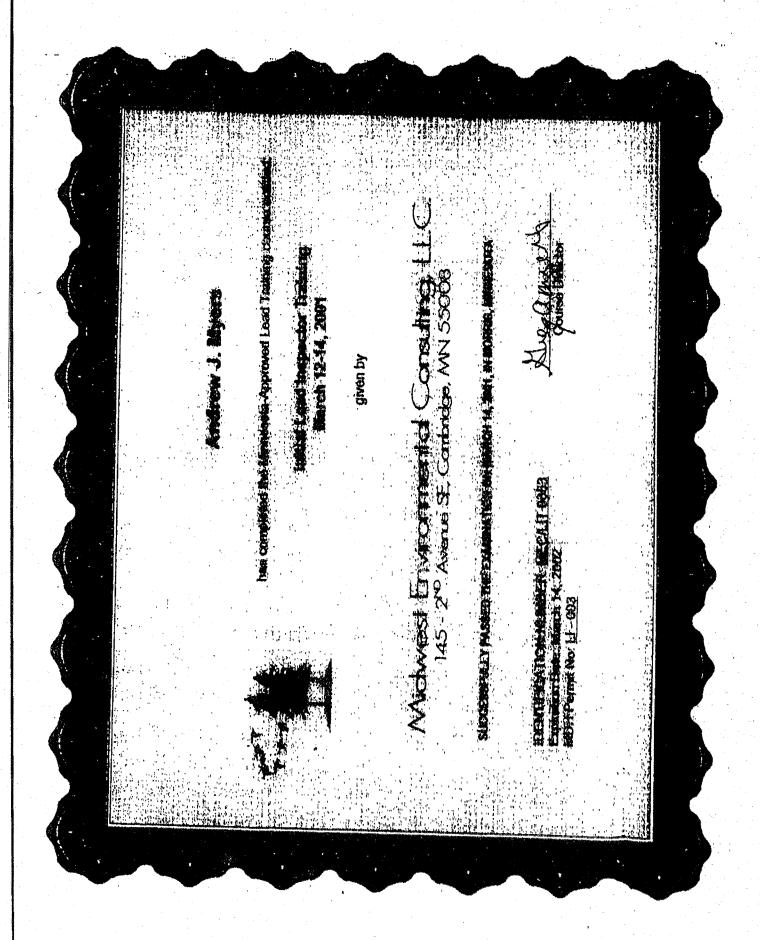
Lead Inspector

March 22, 2001 Morris, Minnesota This certificate is nontransferable.

The A Burgan

Patricia A. Bloomgren, Director Division of Environmental Health

Jan K. Malcom Commissioner





RA-0239 Lead Risk Assessor Independent Examination

121 East Seventh Place, Suite 220 • St. Paul, Minnesota 55101 • (651) 215-0700

This certifies that

### Andrew Myers

has successfully passed the required independent examination for:

Lead Risk Assessor

June 26, 2001 Minneapolis, Minnesota This certificate is nontransferable.

Fair A. Burge

Patricia A. Bloomgren, Director Division of Environmental Health

Jan K. Malcom Commissioner



Director, Env. Health Div.

Risk Assessor
Licensed by:
State of Minnesota
Department of Health

License No. LR284 Expires 08/26/2012

Greg A Myers 19667 Salmonson River Rd Mora, MN 56051

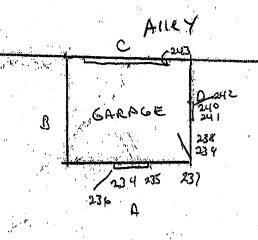
### APPENDIX B

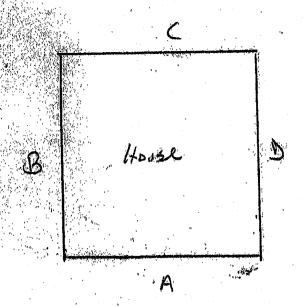
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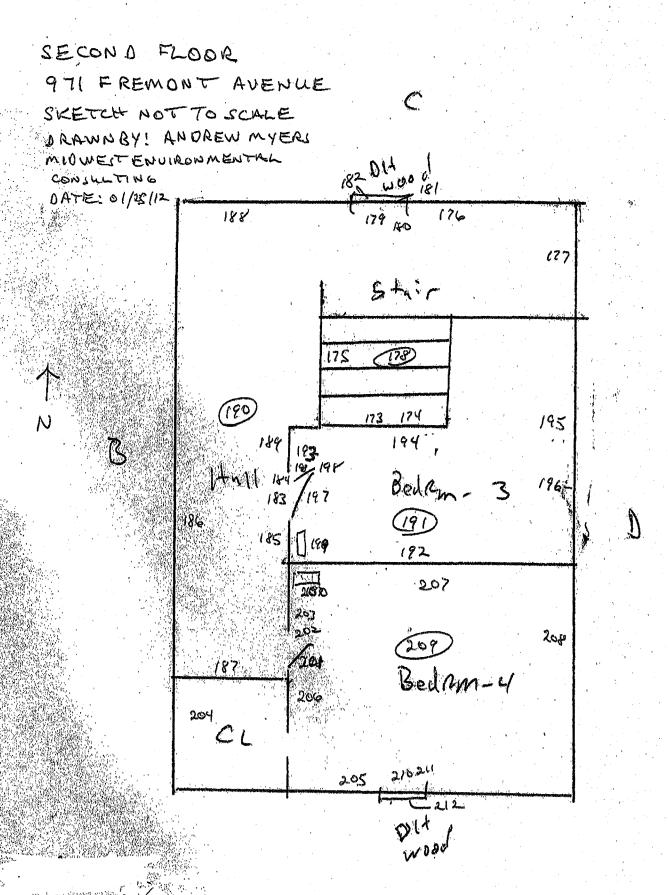
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2.42	2.29	2.29	3.15	2.14	2.29	2.15	2.28	2.29	2.14	3.15	2.01	2.28	2.42	0.28	0.14	0.14	2.73	5.59	4.16	3.58	33	2.59	2.72	2.3	2.88	2.3	2.15	2.15	2.43	2.15	2.16	2.15	2.01	2.29	1.86	2.16	2.3	2.58
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FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	FAIR	POOR	POOR	POOR	POOR	POOR	POOR	POOR	POOR	POOR	POOR												
METAL	VINYL	viny	WOOD	WOOD	WOOD	MOOD	WOOD	WOOD	WOOD	WOOD	MOOD	WOOD	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	PLASTER	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	DRYWALL	tile
vent	FLOOR	BASEBOARD	DOOR casing	CABINET	WINDOW casing	WINDOW casing	DOOR	DOOR CASING	CLOSET DR	CLOSET DR JIMB	CLOSET SHELF	Clst Shelf support	CLOSET WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	CEILING	CEILING	CEILING	WALL	WALL	WALL	DOOR	DOOR JAMB	WALL	WALL	WALL	WALL	COLUMN	CABINET	CLOSET dr	CLOSET dr casing	CLOSET wall	FLOOR
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2.16	5.29	2.15	2.15	2.15	2.29	2.29	2.44	2.42	2.15	2.28	2.14	1.72	2.28	5.38	2.15	2.3	2.14	2.3	3.16	2.28	2	2.15	2.15	720	148	2.15	2.01	2.15	3.01	2.3	2.15	2.01	2.01	2.3	2.42	2.14	1.99	2.15	3.15
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varnish	varnish	varnish	varnish	varnish	varnish	varnish	BROWN	TAN	WHITE	WHITE	WHITE	TAN	WHITE	WHITE	GREEN	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	WHITE	WHITE	AMHINE.	MARTE	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	VARNISH	
POOR	POOR	POOR	POOR	POOR	POOR	POOR	INTACT	INTACT	POOR	POOR	POOR	POOR	P00R	POOR	POOR	POOR	INTACT	INTACT	INTACT	INTACT	INTACT	POOR	POOR	POOR	1000	INTACT	INTACT	INTACT	INTACT	INTACT	INTACI	INTACT	INTACT	INTACT	INTACT	INTACI	INTACT	INTAC	
WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	vinv	viny	METAL	DRYWALL	DRYWALL	MOOD	MOOD -	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	MOOD	WOOD	WOOD	- Succions	(00)	MOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	MOOD	WOOD	WOOD	
DOOR	DOOR casing	CABINET	WALL	WALL	WALL	WALL	BASEBOARD	FLOOR	CABINET	WALL	WALL	MOONING	GOSTION	CHOSEL DRICASING	CLOSET SHELF	DOOR CASING	WALL	WAIL	WALL	WALL	CEILING	WINDOW CASING	WINDOW SASH			DOOR	DOOR CASING	RASFROARD	WAII	WALL	WALL	WAII	CFIING	CERING	WAII	WAII	WALL	WAII	WALL
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2.15	2.15	2.29	2.15	1.86	. 2.01	2.14	2.14	2	2.29	2.15	2.15	2.29	2.15	2.29	144	143	143	157	2.29	2.15	62	158	0.71	1.14	242	157	144	1.78	121	3.16	2.15	3.15	2.15	144	143	172	2.15	2.15	2.58
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VARNISH	VARNISH	WHITE	WHITE	varnish	varnish	varnish	varnish	varnish	varnish	varnish	varnish	varnish	WHITE	WHITE	WHITE	WHITE	WHITE	grey	grey	black	grey.	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHAT	WHITE	WHITE	WHITE	WHITE	WHITE	MHINE	MITTER	grey	WHITE	WHITE	MALITTE
INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	INTACT	POOR	POOR	POOR	POOR	POOR	POOR	POOR	POOR	POOR		INTACT	INTACT		INTAGE	EVEN	NIME	INTACT	INTACI	INTACT	INTACT	INTACT	P008	POOR	POOR	POOR	POOR	TATTAT.
WOOD	WOOD	METAL	METAL	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	W000	WOOD -	W00D	GOOM	CONCRETE	METAL	CONCRETE	METAL	METAL	METAL	MERA	NEAL	NIEW.	METAL	METAL	METAL	METAL	METAL	METAL	(doorn	WOOD	MOON.	WOOD	WOOD	******
DOOR	DOOR jamb	RADIATOR	RADIATOR	DOOR	DOOR jamb	BASEBOARD	CLOSET wall	WALL	WALL	WALL	WALL	CEILING	WINDOW casing	WINDOW sash	Window Parting Bead	DOOR	DOES namb	Proper Processing	TREAD	ig.	toundation	AUISEA MIGIGINIM	WINDOW casing	WINDOW casing	MANAGEMENT COSTOR			coffit	soffi	cirling	Siding	siding	siding	DOOR	1000	Appendig threshold	WINDOW	WINDOW	
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AM 2.01 AM 1 AM 1.13 AM 1.13 AM 2.54 AM 3.47 AM 1. AM 1.05 4.15 2.29 13.18 8.15 2.01 3.29 7.71 QO1 > QO1 > QO1 > 1.1 < LOD 15.1 < 100 = 15.1901 > 1001 > 1001 > 001> 001> 001> do1> do1> do1> 001 > 60 1<1.00 001 > 001 > 001 > 6.0 1.1 Neg Neg Neg Neg Neg Mul WHITE WHITE WHITE WHITE WHITE WHITE INTACT INTACT INTACT INTAC POOR POOR WOOD METAL METAL METAL WOOD METAL WINDOW sjamb WINDOW sash WINDOW sill DOOR jamb DOOR jamb calibrate calibrate calibrate 800 ۵ ۵ ۵ ۵ GARAGE GARAGE GARAGE GARAGE GARAGE GARAGE 971 FREMONE 259-1/75/2012/15309 246 1/25/2012 15:16 240 1/25/2012 15:10 244 1/25/2012 15:15 245 1/25/2012 15:15 238 1/25/2012 15:09 239 1/25/2012 15:10 241 1/25/2012 15:11 242 1/25/2012 15:11 243 1/25/2012 15:12 971 FREMONT 971 FREMONT 971 FREMONT 971 FREMONT 971 FREMONT **971 FREMONT** 971 FREMONT **971 FREMONT** 971 FREMONT

All Phase Companies 971 Fremont Avenue

St. Paul MN

### **Description of Column Titles**

Site:

The sequential number of the site (homes or buildings) inspected on a

particular day.

No:

The sequential XRF sample number for a given site.

XL No/Map: The sample number recorded on the maps of a particular site.

Date:

Date that the XRF sample was analyzed.

Time:

Time of XRF sample analysis.

Floor:

The sample location floor level (0 = basement, 1 = first floor, 2 = second

floor).

Room:

The specific location where the sample was analyzed on the site.

Calibrate is also recorded in this column when appropriate.

Side:

Side of the room based on sampling methodology as described earlier in this report. The only four sides that can be designated are A, B, C, and D.

Structure:

This refers to the general building component that the test was performed

on. It may also include modifications such as: upper, lower, exterior,

interior, right, and left.

Feature:

Specifies additional information about a structure.

Condition:

Describes whether the surface being tested is Intact: good condition; Fair: less than 2 square feet of damage to large interior surface, i.e., wall, less than 10 square feet of damage to large exterior surface, i.e., outside walls, or less than 10% damage to small surface areas, i.e., baseboards. trim, etc.; Poor: more than 2 square feet of damage on large interior surfaces, more than 10 square feet of damage to large exterior surface

areas, or more than 10% damage to small surface areas.

Substrate:

Refers to the material that the structure was made of, i.e., wood, concrete,

drvwall, etc.

Color:

Color of surface tested.

Result:

The lead concentration in mg/cm<sup>2</sup> as determined with L-shell and K-shell

X-ray data:

RES:

PbL(mg/cm²): The lead concentration as determined with L-shell X-ray data.

PbK:

Results: POS - above action level, NEG - below action level.

PbC:

The lead concentration in mg/cm² on the K-shell X-ray data spectrum. The combined lead concentration in mg/cm² of the L-shell and K-shell X-

ray data spectrum.

Depth:

This is the index that is a qualitative indication of the depth of the lead in paint. As the number approaches 1, the lead is concentrated close to the top layers of paint. The largest number available for depth index is 10. The greater the number, the more likely interfering elements may have

been detected.

**Duration:** 

The length of the XRF sample analysis in seconds.

inspector:

When multiple inspectors are used, this number indicates who sampled at

the time indicated.

Note:

This refers to any notes that were collected during the analysis of the particular sample. Then can be found on the field data sheet titled "Lead-Based Paint Inspection Data Page."

## SAMPLING METHODOLOGY

Buildings were systematically inspected for lead-based paints. The A side of the building is the side facing the street. Starting from the A side, the other sides are lettered consecutively (B, C, D), going clockwise around the building.

Inside the unit, each floor was assigned a number starting with **0** for the basement, **1** for the first floor, and **2** for the second floor.

Some rooms that are unique in the building are named on the inspection report. These would include things like pantry, kitchen, halls, bathrooms, and staircases. If there is more than one of a certain type of named room, then they are numbered (e.g., staircases to basements are numbered staircase 1, while staircases to the second floor are labeled staircase 2). Room numbering starts in the **A-D** corner of the building and continues clockwise from that point.

Within each room of the building, each of the sides of the room are named. The naming of walls in a room, for instance, follows the same pattern as that used on the exterior of the building, namely, the street side of each room is labeled **A**, and then clockwise from that wall, walls are labeled **B**, **C**, **D**.

## APPENDIX B

XRF TEST RESULTS SAMPLING MAPS DATA PAGES CALIBRATION DATA

## APPENDIX C

## LABORATORY RESULTS CHAIN-OF-CUSTODY

with Risk Assessor Training as completed the literapode Approved Load Training and Modwest Dividential Constitution In 125-2" Aware & Contrate, MN 55008 · BLOSSESTALLY PASSED THE ELLERATION ON LINE BY 2001, BE MINISTED. June 25-26, 2001 given by DEMINICATION NUMBER MECHANISM

RATE TO THE TOTAL STATE OF THE STATE OF



Director, Env. Health Div.

Risk Assessor
Licensed by:
State of Minnesota
Department of Health License No. LR284 Expires 08/26/2012

Greg A Myers 19867 Salmonson River Rd Mora, MN 56951



## EMSL Analytical, Inc.

14375 23rd Avenue North, Minneapolis, Mn 55447

Phone: (763) 449-4922 Fex: (763) 449-4924 Email: minneapolisiab@emsl.com

Attn: Greg Myers

Midwest Environmental Consulting, L.L.C.

125 Railroad Ave SW

Customer ID:

MIDW56

Customer PO:

cc/182793

Received:

01/17/12 8:30 AM

EMSL Order:

351200253

Mora, MN 55051

Fax:

(763) 691-0145

Phone: (763) 691-0111

EMSL Proj:

Project:

502/0112 H 971 Fremont Ave, St. Paul, MN

## Test Report: Lead in Dust by Flame AAS (SW 846 3050B\*/7000B)

Lab ID:	Analyzed	Area Sampled		RDL	Lead Concentration	Notes
0001	1/18/2012	144 in²		10 µg/tt²	<10 µg/ft²	Site: Living Room Floor by Front door (A)
Client So	imple 502/011	12 H W1				Collected: 1/16/2012
0002	1/18/2012	36 in²		800 h8\4s	<600 µg/ft*	Site: Window Sill Living room (Side D)
Client So	imple 502/01	12 H W2				Collected: 1/16/2012
0003	1/18/2012	144 in²		10 µg/ft*	690 µg/ft²	Site: Kitch Floor by back entry
Client Sc	imple 602/011	12 H W3				Collected: 1/16/2012
0004	1/18/2012	36 in².		40 µg/(t°	190 µg/ft²	Site: Bedroom 1 Window Trough (A)
Client Se	ample 502/01	12 H W4				Collected: 1/16/2012
0005	1/18/2012	144 in²		10 μg/tt²	<10 µg/ft²	Site: Bedroom 1 Floor under Window
Client Sc	ample 502/01	12 H W5		•		Collected: 1/16/2012
0006	1/18/2012	36 ln²		40 µg/lt²	<40 µg/ft²	Site: Bedroom 2 Window Sill ('C)
Client Sc	ample 502/01	12 H W6				Collected: 1/16/2012
0007	1/18/2012	144 in²	1	10 µg/ft²	.<10 μg/ft <sup>p</sup>	Site: Bedroom 2 Floor Under Window
Client S	ample 502/01	12 H W7				Collected: 1/16/2012
0008	1/18/2012	36 in*	·	2000 μg/ft <sup>a</sup>	84000 µg/ft <sup>a</sup>	Site: Bedroom 3 (upstairs) Window trough (A)
Client Si	ample 502/01	12 H W8				Collected: 1/16/2012

Initial report from 01/18/2012 14:27:20

Realist will will be a second

Rachel Travis, Laboratory Manager or other approved signatory

Reporting limit is 10 ug/wipe, ug/wipe = ug/ti2 x area sampled in ft2. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be raproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection solivities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. QC date associated with this sample set is within acceptable limits, unless otherwise noted. The lab is not responsible for date reported in µg/ti² which is dependent on the area provided by non-lab parennel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. \* slight modifications to methods applied.

Samples analyzed by EMSI. Analytical, Inc. Minneapolis, Mn AHA-LAP, LLC ELLAP 163162

## Andrew J. Myers



has completed the Minnesota-Approved Lead Training course entitled:

Lead Risk Assessor Refresher Training

August 25, 2011

given by

Midwest Environmental Consulting, L.L. 145 - 2<sup>rd</sup> Avenue SE, Cambridge, MN 55008 Phone: 763.691.0111 SUCCESSFULLY PASSED THE EXAMINATION ON August 25, 2011, IN Cambridge, MINNESOTA

IDENTIFICATION NUMBER: MEC/LRAR 0847 Expiration Date: August 25, 2012 MDH Permit Number: RAR-006

Course Director/Primary Instructor

Approved by the State of Minnesota under Minnesota Rules, parts 4761,2000 to 4761,2700.



Lead Inspector Independent Examination

1-0031

121 East Seventh Place, Suite 220 • St. Paul • Minnesons 55101 • (651) 215-0700

This certifies that

# Andrew Myers

has successfully passed the required independent examination for:

Lead Inspector

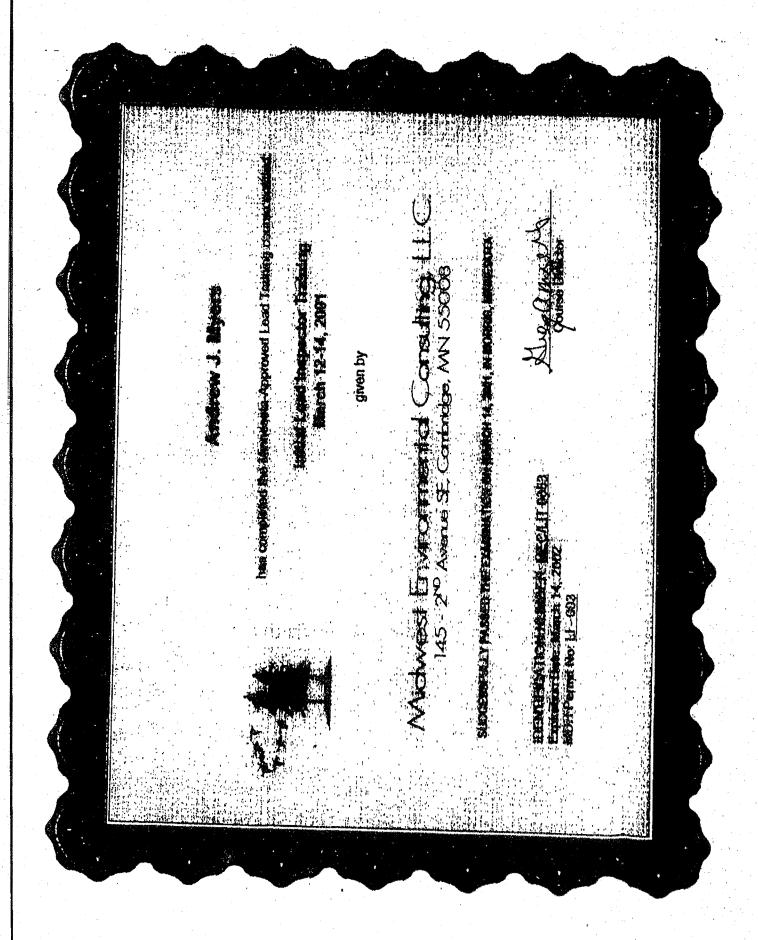
March 22, 2001 Morris, Minnesota

This certificate is nontransferable.

Fair A. Bangar

Patricia A. Bloomgrea, Director Division of Environmental Health

Jan K. Malcom Commissioner





RA-0239 Lead Risk Assessor Independent Examination

121 East Seventh Place, Suite 220 • St. Paul, Minnesona 55101 • (651) 215-0700

This certifies that

## Andrew Myers

has successfully passed the required independent examination for:

# Lead Risk Assessor

Minneapolis, Minnesota June 26, 2001

This certificate is nontransferable.

F. A. B.

Division of Environmental Health Patricia A. Bloomgren, Director

Jan K. Malcom Commissioner



## EMSL Analytical, Inc.

14375 23rd Avenue North, Minneapolis, Mn 55447

Fax: (763) 449-4924 Email: minneapolisiab@emsi.com Phone: (763) 449-4922

Attn: Greg Myers

Midwest Environmental Consulting, L.L.C.

125 Railroad Ave SW

Customer ID:

MIDW58

Customer PO:

cc/182793

Received:

01/17/12 8:30 AM

EMSL Order:

351200253

Mora, MN 55051

Fax:

(763) 691-0145

Phone: (763) 691-0111

EMSL Proj:

Project: 502/0112 H 971 Fremont Ave, St. Paul, MN

## Test Report: Lead in Dust by Flame AAS (SW 846 3050B\*/7000B)

Lab ID:	Analyzed	Area Sampled	RDL	Lead Concentration	Notes
0009	1/18/2012	144 in²	10 µg/ft²	55 µg/ft²	Site: Bedroom 3 Floor under Window
Maut C	ample 502/01	12 H W9			Collected: 1/16/2012
0010	1/18/2012	144 in²	10 µg/ft*	37 μg/(t²	Site: Basement Floor bottom of Stairs
Client S	ample 502/01	12 H W10			Collected: 1/16/2012
0011	1/18/2012	144 in²	10 μg/ft <sup>s</sup>	<10 µg/ft²	Site: Kitch Floor
	ample 502/01	12 H W11			Collected: 1/16/2012

Initial report from 01/18/2012 14:27:20

Rachel Travis, Laboratory Manager or other approved signatory

Reporting limit is 10 ug/wips, ug/wips = ug/t/2 x area sampled in ft2. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. QC data associated with this sample set is within acceptable limits, unless otherwise noted. The lab is not responsible for data reported in µg/t/2 which is dependent on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. \* slight modifications to methods applied.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AlHA-LAP, LLC ELLAP 163162

Contact:

Midwest Environmental Consulting, L.L.C. 125 Railroad Avenue SW - Mora, MN 55051 763-691-0111 / 320-679-4054 Fax: 763-691-0145 / 320-679-4442 Client Address:

CHAIN OF CUSTODY

Project Number Clear

Project 47

Lacons and a	Sample ID	Sample Description	Collection	Collection Date/Time	Matrix (Vol./Area)	Analysis Requested
TD	2/0424 11	Deliver we him can the burnet de (9)	1/8/12	11:00 11:00	A x 12 10	Ph 44/192
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<u>L.</u>	3	int Blan 1 who togs (4)			18x2 in	
	5	22			PXI in	
	2.66	Ruban 2 winder sill (C)			18x2 in	
	5	Edm 2 Flor whereindas			12423	
	1	Beliam 3 (waters) while though (A)			10×2 in	
<u></u>	3	Referen			PAD IN	
	25	Burn Age Co.	7		DXQ in	
	= +		<b>&gt;</b>	-}	12x12 in	4
					-	
<u></u>						
	Sampled by thought			Delivered by 2		And Charles Date: 4/17/12-Times 20 S.
8 0	Received by	Date:	Į.	Disposition of Samples		
2	Notes:		Reputred Field Alange miluded	1 law (Life) Pu	cluded	only fith with
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